

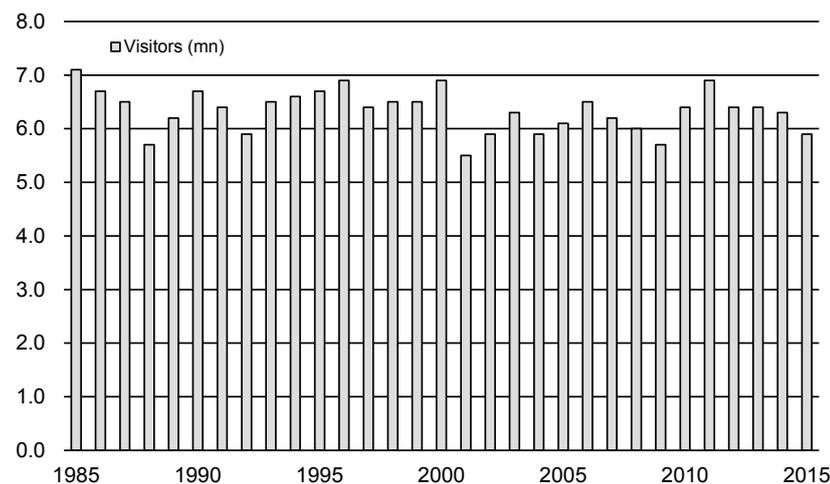
Oktoberfest 2016: beer consumption conundrum

- This Saturday, the world's largest fair will open for the 183th time.
- Our famous Wiesen Visitor Price Index shows another increase of 3.7% this year, mainly driven by beer and Hendl prices.
- The average price of one mass of beer will be EUR 10.54. The "cheapest" Mass (or liter) can be purchased for EUR 10.40.
- Despite the ongoing inflation in beer prices, the upward trend in beer consumption per head remains surprisingly stable.

It's that time of year again. This Saturday, at the stroke of 12 noon, the mayor of Munich will ceremoniously tap the first keg of beer and declare "O'zapft is" ("It is tapped"). The world's largest fair will then open to the public. The Oktoberfest traces its roots back to the festivities held to celebrate the marriage of Bavaria's Crown Prince Ludwig to Princess Therese of Saxe-Hildburghausen on 12 October 1810. Since then, the Oktoberfest has been held every year on the Theresienwiese (or Wiesen for short), named in honor of the Crown Princess – except for 24 times, when it was canceled due to epidemics and the two world wars. This year, the event is being repeated for the 183th time.

Compared to other popular events around the world, the Oktoberfest takes one of the top spots. With the participation of 5.9mn visitors in 2015, it ranges between mega events like the 2012 Summer Olympics in London with 8.2mn visitors and the 2014 FIFA World Cup in Brazil with about 3.4mn visitors.

CHART 1: OKTOBERFEST VISITORS



Source: City of Munich, UniCredit Research



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Last year, the number of visitors to Oktoberfest declined by about 400,000 from 6.3mn in 2014. This is one million lower than the most recent peak in 2011 with 6.9mn visitors. However, 2011 was a year in which the “Oide Wiesn” took place, which opened for the first time in 2010 to celebrate the 200th anniversary of the Oktoberfest and provides visitors with nostalgic beer tents and folk festival attractions. Thereafter, it has been held every year except for 2012, when additional to the Oktoberfest an agricultural exhibition took place in Munich. In 2011, the “Große Wiesn” also took place (an extended version of the Oktoberfest), which is held whenever the Day of German Unity (national holiday on 3 October) falls at the beginning of the week after the two regular Oktoberfest weeks. This will be the case this year and might be a supporting factor to the number of visitors compared to 2015. However, since the agricultural exhibition will also take place this year, there will be no “Oide Wiesn”, except for one tent, resulting in a smaller “regular” Wiesn than usual, the latter might be dampening factor to this year’s numbers.

Some Wiesn arithmetic

The Mass price crossed the psychological important threshold of EUR 10 for the first time in 2014 in some tents. And, while it was still possible to get a Mass for this amount at least in one tent in 2015, this year all tent hosts will charge amounts significantly above this threshold. The “cheapest” Mass can be purchased for EUR 10.40 in a couple of tents, but the average price will be EUR 10.54 compared to EUR 10.23 in 2015 (a table comparing the prices and price development can be found at the end of this article). This would imply another year of a 3% beer price inflation rate, again way above overall consumer price inflation in Germany. Without getting nostalgic and blaming anybody, in 1985 the price for one Mass was 6.1 deutschmarks, or the equivalent of EUR 3.1. Since then, the beer price at the Wiesn has risen by more than 230%. This compares to just a 69.7% rise in German consumer prices.

But what about the overall costs for a visit to the Oktoberfest? Our famous WVPI (Wiesn Visitor Price Index) gives the answer (chart 2). The WVPI is a composite index reflecting the cost of visiting the Wiesn, which is broken down as follows: the price of public transportation (return ticket), consumption of two liters (two Mass) of beer and half of a grilled chicken (Hendl). The WVPI increased another 3.7% after 3.6% in the previous year. A view of the subcomponents reveals that it is especially the Hendl price that has been accelerating in recent years and that shows an inflation rate of 7.8%(!) this year.

CHART 2: WIESN VISITOR PRICE INDEX AND CPI

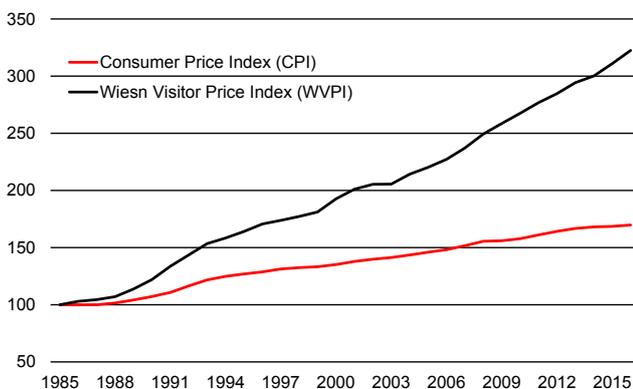
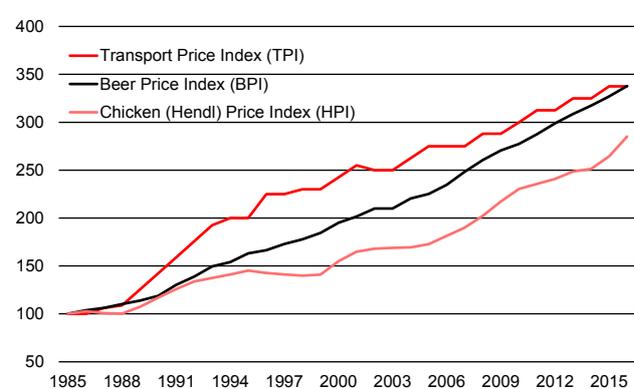


CHART 3: WVPI COMPONENTS

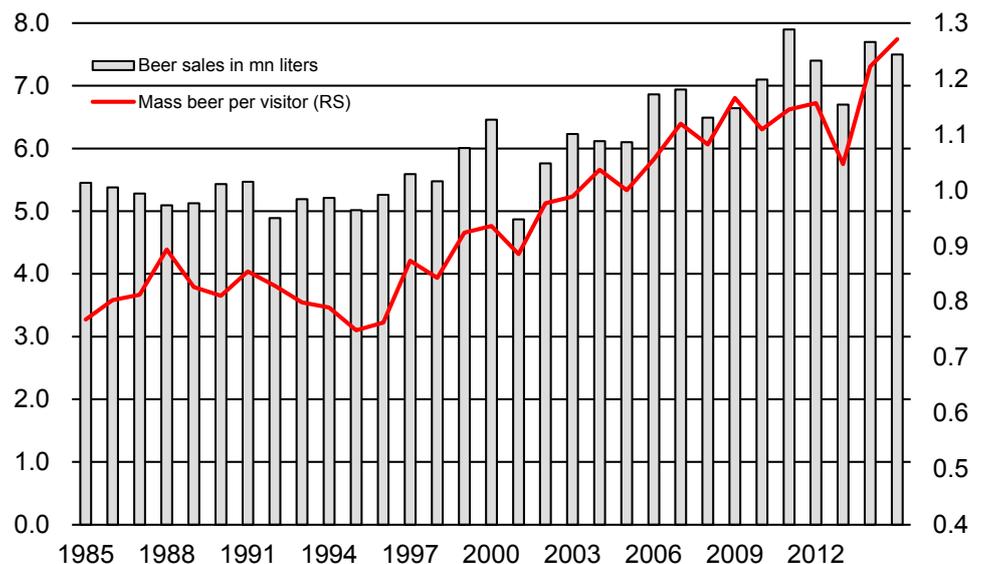


Source: City of Munich, Munich public transport authority, Wiesn vendors, UniCredit Research

Although the price increase is astonishing, we assure you that there is no reason to panic for two reasons: **1.** Germany-wide prices for poultry have actually decreased during the last two years, making the strong Hendl-price increase a Wiesn-specific outlier. **2.** Hendl prices have developed more “moderate” compared to beer prices at the Wiesn or transport prices over the years (see chart 3). This allows for a little catch-up effect in chicken prices compared to the other expenses. On the other hand, there is good news regarding transportation prices, as they will stabilize compared to the previous year. However, as the historical pattern shows, public transportation providers have often raised their prices just every second year, so it is likely that we will see the next increase in 2017.

Coming back to the most important (and probably delicious) cost factor at the Wiesn, namely Munich’s finest brew, at every Oktoberfest only a few Munich-based traditional breweries are allowed to provide the famous Oktoberfest Bier. And visitors certainly love it. Despite the strong increases in prices, consumption per visitor increased since the early 90s and peaked last year, reaching on average 1.27 Mass. Only in 2013 has there been a significant decrease in beer consumption per capita, but this was more than compensated for one year later. Overall consumption shrank a bit to overall 7.5mn liters, due to the decrease in the absolute number of visitors (see chart 4).

CHART 4: BEER SALES AT OKTOBERFEST



Source: City of Munich, UniCredit Research

Interestingly, per-capita consumption suggests a positive trend since the mid-1990s, and that even despite strong price increases. There are several explanations for this phenomenon.

First, the increasing per-capita consumption suggests that beer at the Oktoberfest resembles a Giffen good, which is a good that people consume more of as its price increases. In their 2008 paper, Jensen and Miller¹ showed that such goods really exist. They looked at consumption behavior of poor Chinese households and showed that those consume more rice as prices go up. The reason is that when the price of rice increases, consuming other more expensive substitutes (like meat) to satisfy the daily amount of calories needed is no longer affordable.

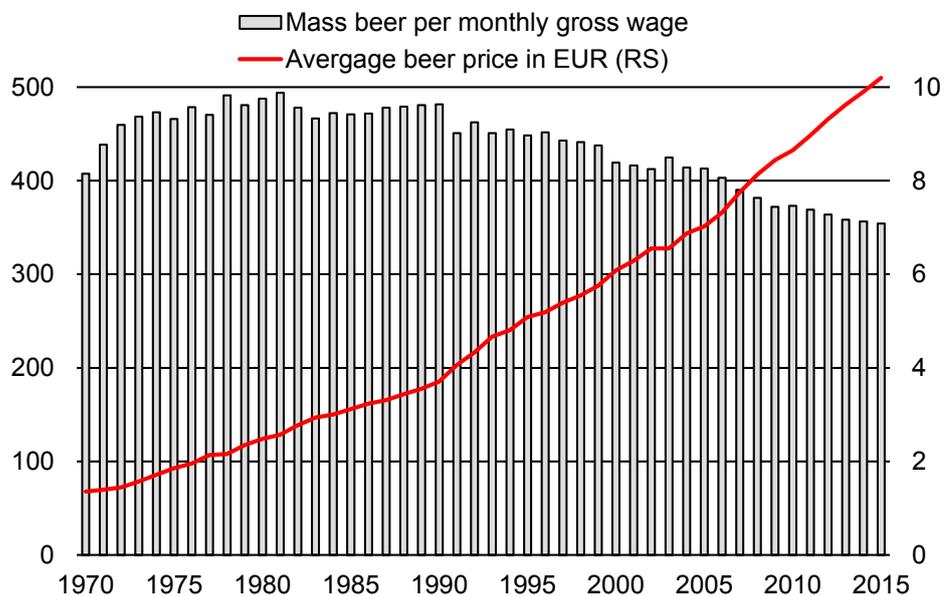
¹ Jensen, R. T. and N. H. Miller (2008), "Giffen Behavior and Subsistence Consumption", *American Economic Review*, 98(4), pp. 1553–77

Hence, households need to stick with rice alone and therefore buy more of it despite the increase in price. In similar ways, this behavior applies to beer consumption at the Oktoberfest, particularly as close substitutes available inside the tents are lacking and visitors need to consume the goods provided.

Second, another explanation for the ongoing trend in per-capita consumption would be a shift in the age structure of visitors. If, for example, fewer families would have visited the Wiesn in recent years, the relative amount of people eligible to drink beer would have increased (in the absence of children below 16 years of age). This in turn could have driven the increase in per-capita consumption up. Based on surveys conducted by the "Referat für Arbeit und Wirtschaft"², it is true that the age structure shifted and the share of visitors under 30 decreased by 4 percentage points between 2008 and 2014. However, during the same time, the number of visitors with children under 14 years increased by 4 percentage points. So there are no clear signs from this side as well. Unfortunately, we lack appropriate data to shed more light on the composition of Wiesn visitors over time.

Third, it might be that increasing wages could have had a positive effect on demand for Oktoberfest beer, simply because people can afford more. But although (real) wage growth has indeed accelerated recently, it is still not sufficient to offset the increases in beer prices. Chart 5 shows the amount of beer one could theoretically buy at the Oktoberfest with an average monthly salary in Germany over time. The chart reveals that the beer-purchasing power of Germans actually decreased constantly since the 70s. Thus, consumer behavior remains a bit puzzling.

CHART 5: THEORETICAL BEER BUY CAPACITIES PER AVERAGE WORKER AND MONTH



Source: UniCredit Research

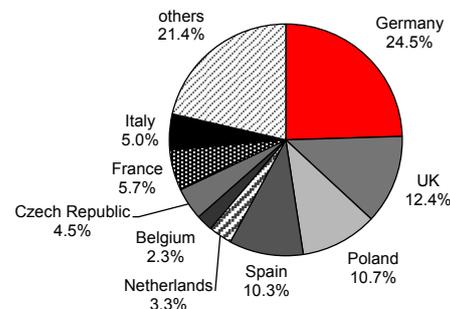
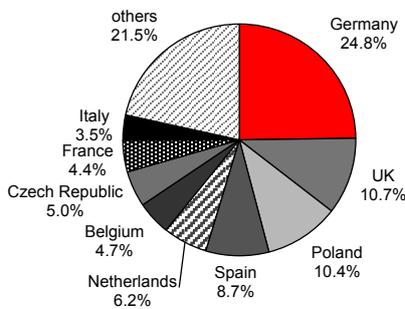
² Source: <http://www.muenchen.de/veranstaltungen/oktoberfest/schmankerl/wiesn-wirtschaftsfaktor.html>

Beer: a German cultural asset

When assessing the stronger price increases at the Oktoberfest, it needs, however, to be mentioned that there has also been a clearly disproportionate increase in the costs of erecting and operating a *Wiesn* tent, not least because of the much more stringent security requirements. Furthermore, the competitive situation at the Oktoberfest is completely different compared to that of restaurants and the retail beer trade in Germany. The variety of beers offered in Germany is huge. Across the country, there are more than 1,300 operating breweries, suggesting that German breweries have little pricing power. From a European perspective, with 38.3bn liters of beer produced in 2014, Germany represents about ¼ of total EU beer production. Regarding consumption, 35.2bn liters were consumed in 2014, again roughly ¼ of that amount in Germany (see chart 7).

CHART 6: BEER PRODUCTION (% OF EU TOTAL)

CHART 7: BEER CONSUMPTION (% OF EU TOTAL)



Source: The Brewers of Europe, UniCredit Research

However, this does not hold true for the Oktoberfest, since here competition is limited. The regulations for operating a beer tent at the Wiesn state: “The Oktoberfest is the traditional Munich festival with Munich hospitality and Munich beer. The aim is to preserve this tradition. For this reason, visitors to the Wiesn may only be served Munich beer brewed by the efficient and traditional Munich breweries that comply with the Munich Purity promulgated in 1487 and the German Purity promulgated in 1906.” Accordingly, only larger breweries with production facilities located in the City of Munich are allowed to supply tents at the Wiesn to ensure a secure and uninterrupted flow in the beer tents. At the moment, only six breweries meet this standard.

One of the interesting questions this year is whether the solid increases in beer and Hendl prices will have an impact on sales. The continuous decline in consumption over the last three years suggests that there is further downward pressure on sales in the pipeline. Nevertheless, increasing Wiesn prices are once again not expected to impact low inflation expectations in Germany and in particular in the eurozone. Beer prices contribute almost 1% to the basket of goods used to calculate the inflation rate in Germany, hence they would need to triple – holding all other prices constant – to reach the ECB’s inflation target of 2% for Germany. Since beer prices in Germany have increased by 42% since 1991, there is still some room for improvement. Prost!

Box: A Glimpse into History

The Oktoberfest has its roots in October of the year 1810, when Munich citizens were invited to celebrate the marriage of Bavaria's Crown Prince Ludwig (later King Ludwig I) to Princess Therese of Saxe-Hildburghausen. The festival was eventually prolonged and brought forward to September to allow for better weather conditions. Nowadays, the last day of the festival is usually the first Sunday in October (or the Monday afterwards if this is 3 October, Day of German Unity). Over the past 206 years, Oktoberfest was cancelled only 24 times, due to cholera epidemics and the two World Wars. As stable as it has always been, with its 14 large tents and about 20 small tents, two years ago a new tent opened. One of the most popular tents, the Hippodrom, made way (after 111 years) to a new Marstall tent. Thereby, "horse race place" was replaced by "the royal riding school", a big newcomer with a stage resembling a carousel with horses around it. This year, the Poschner tent will return to the Wiesn after it was banned last year, whereas Heimer, Fisch-Bäda and Knödelei will not be present anymore.

Source: City of Munich, UniCredit Research

OKTOBERFEST TENTS – WHERE TO FIND "CHEAP" BEER THIS YEAR

EUR	Beer price 2016	Beer price 2015	Difference yoy	
			in Cents	In %
Ammer	10.60	10.20	40	3.9
Armbrustschützen-Festzelt	10.55	10.25	30	2.9
Augustiner-Festhalle	10.40	10.10	30	3.0
Bräurosl	10.60	10.30	30	2.9
Familienplatzl	10.40	10.20	20	2.0
Festzelt Tradition (Oide Wiesn)	10.40	10.20	20	2.0
Fischer-Vroni	10.60	10.30	30	2.9
Glöckle Wirt	10.50	10.20	30	2.9
Goldener Hahn	10.50	10.20	30	2.9
Hacker-Festzelt	10.60	10.30	30	2.9
Haxnbrateri	10.40	10.10	30	3.0
Heinz' Sausage and Chicken Grill	10.40	10.10	30	3.0
Hofbräuhaus-Festzelt	10.60	10.30	30	2.9
Käfer Wies'n Schänke	10.60	10.30	30	2.9
Kalbsbrateri	10.45	10.20	25	2.5
Löwenbräu-Festzelt	10.60	10.35	25	2.4
Marstall	10.60	10.30	30	2.9
Ochsenbrateri	10.45	10.20	25	2.5
Paulaner-Festhalle	10.60	10.30	30	2.9
Poschner	10.60	n.a.	n.a.	n.a.
Schottenhamel-Festhalle	10.55	10.25	30	2.9
Schützenzelt	10.60	10.30	30	2.9
Vinzenz Murr Metzgerstubn	10.60	10.00	60	6.0
Wildmoser's Roasted Duck and Chicken	10.50	10.20	30	2.9
Wildstuben	10.65	10.35	30	2.9
Wirtshaus Schichtl	10.40	10.10	30	3.0
Zum Stiftl	10.60	10.30	30	2.9
Zur Bratwurst	10.70	10.40	30	2.9
Average	10.54	10.23	30.19	2.95

Source: City of Munich, UniCredit Research

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